DECLARATION OF DR. GARY L. TURNER

I, Gary L. Turner, declare and state that:

1. I received a Bachelor of Science degree in Chemistry from the University of Illinois, Urbana, Illinois in 1978 and a Doctorate degree in Physical Chemistry at the University of Arkansas, Fayetteville, Arkansas in 1982.

2. From July 1982 to June 1988, I was a research associate for Dr. E. Oldfield, at the University of Illinois, Urbana, Illinois.

3. From August 1985 to the present, I have been employed by Spectral Data Services, Inc., where my duties include conducting Nuclear-Magnetic-Resonance scans on sample materials.

4. From April 1986 to August 1990 I was also employed as the Vice-President of Probe Systems, Inc., where I was responsible for designing Nuclear-Magnetic-Resonance (NMR) equipment.

5. I have published 38 peer-reviewed scientific papers, a list of which is shown in the Attachment.

6. Over the last year, I conducted ^{1}H MAS NMR scans on about 100 blind samples of compounds provided by BlackLight Power, Inc.

7. A 270 MHz NMR Spectrometer, operating at a Larmor frequency of 270.6196 MHZ was used. The Spectrometer was equipped with a Tecmag operating system and Henry Radio amplifiers for pulse generation. The probe was a 7 mm Doty Scientific Standard Probe. The data was collected with a pulse angle of about 35°, with a two second delay between pulses. The samples were spun at two speeds, usually at 4.5 and 3.5 KHz, to identify the spinning sidebands. Typically, 200 transients were collected for each spectrum. The data was processed using NUT (Acorn NMR, Inc.) software.

8. Some of the samples showed signals in regions that are not typical. Most ^{1}H MAS NMR signals are observed from about 10 to 0 ppm, where ppm represents the shift from the control sample, tetramethylsilane. Signals were observed at -4 to -5 ppm. Since 1978, I have been primarily conducting NMR scans and I have never observed signals in the region of -4 to -5 ppm before.

9. I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

By _____
Dr. Gary L. Turner

Date: 5/18/06

ATTACHMENT

Published Papers of Dr. Gary L. Turner

1. G. L. Turner and E. Oldfield, "Effect of a local anaesthetic on hydrocarbon chain order in membranes," Nature 277, 669-70 (1979).

2. J. F. Hinton, G. L. Turner, and F. S. Millett, "A thallium-205 NMR investigation of the thallium(I)-gramicidin complex," J. Magn. Reson. 45, 42-47 (1981).

3. G. L. Turner, J. F. Hinton, and F. S. Millett, "A thallium-205 NMR study of thallium acetate ion association in 2,2,2-trifluoroethanol and dimethylsulfoxide," J. Sol. Chem. 11, 379-86 (1982).

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5. J. F. Hinton, G. L. Turner, G. Young, and K. R. Metz, "Thallium-205 NMR studies of the Tl(I) ion complexation by gramicidin in non-aqueous and micelle solutions," Pure & Appl. Chem. 54, 2359-68 (1982).

6. G. L. Turner, J. F. Hinton, and F. S. Millett, "A ^{205}Tl and ^{13}C NMR study of the Tl(I)-gramicidin A association in dimethylsulfoxide," J. Magn. Reson. 51, 205-12 (1983).

7. G. L. Turner, J. F. Hinton, R. E. Koeppe II, J. A. Parli, and F. S. Millett, "Difference in association of Tl(I) with gramicidin A and gramicidin B in trifluorethanol determined by Tl-205 NMR," Biochim. Biophys. Acta. 756, 133-37 (1983).

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11. G. L. Turner, S. E. Chung, and E. Oldfield, "Solid-state oxygen-17 nuclear magnetic resonance spectroscopic study of the group II oxides," J. Magn. Reson. 64, 316-324 (1985).

12. R. J. Kirkpatrick, T. Dunn, S. Schramm, K. A. Smith, R. Oestrike, and G. Turner, "Magic-angle sample-spinning nuclear magnetic resonance spectroscopy of silicate glasses: a review," in Structure and Bonding in Non-Crystalline Solids, eds., G. E. Walrafen and A. G. Revesz, 303-327 (1986).

13. G. L. Turner, K. A. Smith, R. J. Kirkpatrick, and E. Oldfield, "Boron-11 nuclear magnetic resonance spectroscopic study of borate and borosilicate minerals, and a borosilicate glass," J. Magn. Reson. 67, 544-550 (1986).

14. A. C. Kunwar, G. L. Turner, and E. Oldfield, "Solid-state spin-echo Fourier transform NMR of ^{39}K and ^{67}Zn salts at high-field, J. Magn. Reson. 69, 124-127 (1986).

15. H. K. C. Timken, G. L. Turner, J. P. Gilson, L. B. Welsh, and E. Oldfield, "Solid-state oxygen-17 nuclear magnetic resonance spectroscopic study of zeolites and related systems. I.," J. Amer. Chem. Soc. 108, 7321-7235 (1986).

16. H. K. C. Timken, N. Janes, G. L. Turner, S. L. Lambert, L. B. Welsh, and E. Oldfield, "Solid-state oxygen-17 nuclear magnetic resonance spectroscopic study of zeolites and related systems. II., J. Amer. Chem. Soc. 108, 7236-7241 (1986).

17. W. H. Yang, R. J. Kirkpatrick, and G. Turner, "^{31}P and ^{29}Si MASS NMR investigation of the structural environment of phosphorus alkaline-earth silicate glass," J. Amer. Ceram. Soc. 69, C222-C223 (1986).

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21. R. Oestrike, A. Navrotsky, G. L. Turner, B. Montez, and R. J. Kirkpatrick, "The structural state of aluminum at low concentrations in $2PbO.B_2O_3$ glasses used for solution calorimetry: An aluminum-27 NMR study," Amer. Mineral. 72, 788-791 (1987).

22. B. C. Bunker, D. R. Tallant, C. A. Balfe, R. J. Kirkpatrick, G. L. Turner, and M. R. Reidmeyer, "Structure of phosphorus oxynitride glasses," J. Amer. Ceram. Soc. 70, 675-81 (1987).

23. T. H. Walter, G. L. Turner, and E. Oldfield, "Oxygen-17 cross-polarization nuclear magnetic resonance spectroscopy of inorganic solids," J. Magn. Reson. 76, 106-120 (1988).

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27. K. L. Geisinger, R. Oestrike, A. Navrotsky, G. L. Turner, and R. J. Kirkpatrick, "Thermochemistry and structure of glasses along the join $NaAlSi_3O_8$, $NaBSi_3O_8$," Geochim. Cosmochi. Acta. 52, 2405-2414 (1988).

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32. R. K. Brow, C. C. Phifer, G. L. Turner, and R. J. Kirkpatrick, "Cation effects on ^{31}P MAS NMR chemical shifts of metaphosphate glasses," J. Amer. Ceram. Soc. 74, 1287-90 (1991).

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37. J. L. Bass and G. L. Turner, "Anion distributions in sodium silicate solutions. Characterization by ^{29}Si NMR, infrared spectroscopy and vapor phase osmometry," J. Phys. Chem., 101(50), 10638-10644 (1997).

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